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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
09/986,117	11/07/2001	Paer von Malmberg	030481-0181	4675
22428	7590	10/19/2004	EXAMINER	
FOLEY AND LARDNER			FOREMAN, JONATHAN M	
SUITE 500			ART UNIT	PAPER NUMBER
3000 K STREET NW			3736	
WASHINGTON, DC 20007				

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,117

Applicant(s)

MALMBORG ET AL.

Examiner

Jonathan ML Foreman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 4-9, 11, 25 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10, 12-24 and 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 3, 10, 12, 17 - 21, 23, 24 and 27 - 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,938,624 to Akerfeldt et al. in view of U.S. Patent No. 6,142,958 to Hammarstrom et al. and U.S. Patent No. 5,501,228 to Lafontaine et al.

3. In regards to claims 1- 3, 10, 12, 17 - 21, 23, 24, 24 and 27 - 33, Akerfeldt et al. discloses a male connector for a guide wire which comprises a core wire having a layer of insulating material (Col. 5, lines 15 – 24) and being made of an insulating material (Col. 7, lines 22 – 25), a plurality of conductive members spaced apart longitudinally along the core wire (Col. 4, lines 5 – 9), a plurality of conductors disposed along the core wire, each conductor being connected to the proximal end of a corresponding conductive member and having a layer of insulating material (Col. 4, lines 54 – 67). Akerfeldt et al. discloses that continuous insulating material is disposed between the core wire and the conductive members, a minimum of insulating material being provided the side opposite the cavity (Figure 14; Col. 6, lines 40 – 44). Akerfeldt et al. discloses the core wire in the male connector being separate from the core wire in the guide wire (Col. 6, lines 58 – 65). Akerfeldt et al. discloses the core wire in the male connector being an extension of the core wire in the guide wire. The core wire is shown to have a shape so that a longitudinal cavity is provided inside the male connector (Col. 6, lines 40 – 44). The cavity disclosed by Akerfeldt et al. is adapted remain substantially intact

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when the male connector is slightly bent. Akerfeldt et al. discloses the guide wire having a guide wire core section that extends between a sensor and the male connector. The core wire of the connector is stiffer than the guide wire core (Col. 7, lines 1 – 2; lines 13 – 16). The core wire has a larger outer circumference when taken normal to a longitudinal direction of the extension of the core wire than an outer circumference of the guide wire core section taken normal to a longitudinal direction of the extension of the guide wire core in that the distal tip of the guide wire core is tapered (Figure 18). The term “substantially” has been found to be a broad term. *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). Therefore, the Examiner asserts that the guide wire core of Akerfeldt et al. substantially extends through the guide wire from a distal end to a proximal end. However, if one were to disagree with the Examiner’s position, it would have been obvious in view of Hammarstrom et al. to modify the guide wire core as disclosed by Akerfeldt et al. to extend from the distal end to the proximal end as taught by Hammarstrom et al. in that such a configuration may be preferable over a guide wire core located a short distance in the distal end of the guide wire (Col. 5, lines 8 – 15). Akerfeldt et al. fails to disclose the core wire not having a solid circular cross-section, being asymmetrical, having the conductors being in an extrapolated circumference of the core wire, and having one diameter taken on a plane normal to its longitudinal axis being shorter in length than another diameter of the core wire taken on the same plane, wherein the cavity is adjacent to a surface of the core wire forming a terminus of the shorter diameter.

However, Lafontaine et al. discloses a male connector for a guide wire wherein the core wire (34) does not have a solid circular cross-section, is asymmetrical, has the conductors being in an extrapolated circumference of the core wire, and has one diameter taken on a plane normal to its longitudinal axis being shorter in length than another diameter of the core wire taken on the same plane, wherein the cavity is adjacent to a surface of the core wire forming a terminus of the shorter

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diameter (Figure 6b; Col. 14 – 31). It would have been obvious to one having ordinary skill in the art to modify the core wire as disclosed by Akerfeldt et al. to include the cross-section as disclosed by Lafontaine et al. to form a space through which the conductors can extend (Col. 8, lines 21 – 25).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,938,624 to Akerfeldt et al. in view of U.S. Patent No. 6,142,958 to Hammarstrom et al. and U.S. Patent No. 5,501,228 to Lafontaine et al. as applied to claim 12 above, and still further in view of U.S. Patent No. 6,373,705 to Koelle et al.

Akerfeldt et al. in view of Hammarstrom et al. and Lafontaine et al. discloses insulation material, but fails to disclose the insulation material being a polymer matrix having ceramic particles. Koelle et al. teaches an insulating layer that is preferably made of a polymer into which ceramic particles have been introduced (Col. 4, lines 44 – 46). It would have been obvious to one having ordinary skill in the art to use an insulating material as disclosed by Koelle et al. with the male connector as disclosed by Akerfeldt et al. in view of Hammarstrom et al. and Lafontaine et al. in order to conduct heat from the conductors effectively. Additionally, the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

5. Claims 14, 15, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,938,624 to Akerfeldt et al. in view of U.S. Patent No. 6,142,958 to Hammarstrom et al. and U.S. Patent No. 5,501,228 to Lafontaine et al. as applied to claim 12 above, and further in view of U.S. Patent No. 6,371,972 to Wallace et al.

Akerfeldt et al. in view of Hammarstrom et al. and Lafontaine et al. discloses an insulating material, and discloses that the core wire can be made of an insulating material. However, Akerfeldt et al. in view of Hammarstrom et al. and Lafontaine et al. fails to disclose the insulating material

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consisting of a metal oxidized to a ceramic state. Wallace et al. teaches that oxides with a high dielectric constant are preferred for their electrically resistive insulative properties. Wallace et al. further teaches that such oxides can be formed as a sleeve or hypotube (Col. 7, line 1 – 20). It would have been obvious to one having ordinary skill in the art, in view of Wallace et al. to modify the insulating material as disclosed by Akerfeldt et al. in view of Hammarstrom et al. and Lafontaine et al. to consist of a metal oxidized to a ceramic state in order to take advantage of the electrically resistive insulative properties of such oxides. Additionally, the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan ML Foreman whose telephone number is (703) 305-5390. The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (703)308-3130. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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